

reasonably maximally exposed individual.

*Period of geologic stability* means the time during which the variability of geologic characteristics and their future behavior in and around the Yucca Mountain site can be bounded, that is, they can be projected within a reasonable range of possibilities.

*Plume of contamination* means that volume of ground water in the predominant direction of ground-water flow that contains radioactive contamination from releases from the Yucca Mountain repository. It does not include releases from any other potential sources on or near the Nevada Test Site.

*Repository footprint* means the outline of the outermost locations of where the waste is emplaced in the Yucca Mountain repository.

*Slice of the plume* means a cross-section of the plume of contamination with sufficient thickness parallel to the prevalent direction of flow of the plume that it contains the representative volume.

*Total dissolved solids* means the total dissolved (filterable) solids in water as determined by use of the method specified in 40 CFR part 136.

*Undisturbed performance* means that human intrusion or the occurrence of unlikely natural features, events, and processes do not disturb the disposal system.

*Undisturbed Yucca Mountain disposal system* means that the Yucca Mountain disposal system is not affected by human intrusion.

*Waste* means any radioactive material emplaced for disposal into the Yucca Mountain repository.

*Well-capture zone* means the volume from which a well pumping at a defined rate is withdrawing water from an aquifer. The dimensions of the well-capture zone are determined by the pumping rate in combination with aquifer characteristics assumed for calculations, such as hydraulic conductivity, gradient, and the screened interval.

*Yucca Mountain disposal system* means the combination of underground engineered and natural barriers within the controlled area that prevents or substantially reduces releases from the waste.

### § 63.303 Implementation of Subpart L.

DOE must demonstrate that there is a reasonable expectation of compliance with this subpart before a license may be issued. In the case of the specific numerical requirements in § 63.311 of this subpart, and if performance assessment is used to demonstrate compliance with the specific numerical requirements in §§ 63.321 and 63.331 of this subpart, compliance is based upon the mean of the distribution of projected doses of DOE's performance assessments which project the performance of the Yucca Mountain disposal system for 10,000 years after disposal.

### § 63.304 Reasonable expectation.

*Reasonable expectation* means that the Commission is satisfied that compliance will be achieved based upon the full record before it. Characteristics of reasonable expectation include that it:

- (1) Requires less than absolute proof because absolute proof is impossible to attain for disposal due to the uncertainty of projecting long-term performance;
- (2) Accounts for the inherently greater uncertainties in making long-term projections of the performance of the Yucca Mountain disposal system;
- (3) Does not exclude important parameters from assessments and analyses simply because they are difficult to precisely quantify to a high degree of confidence; and
- (4) Focuses performance assessments and analyses on the full range of defensible and reasonable parameter distributions rather than only upon extreme physical situations and parameter values.

### § 63.305 Required characteristics of the reference biosphere.

- (a) Features, events, and processes that describe the reference biosphere must be consistent with present knowledge of the conditions in the region surrounding the Yucca Mountain site.
- (b) DOE should not project changes in society, the biosphere (other than climate), human biology, or increases or decreases of human knowledge or technology. In all analyses done to demonstrate compliance with this part, DOE must assume that all of those factors remain constant as they are at the